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Alternatives to Benefit Agriculture in Delta

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After decades of Delta study and policy adjustments, there is near universal agreement that severe problems remain unaddressed. Lund and colleagues called current management of the Delta environmentally and economically "unsustainable." Physical factors on the horizon, such as land subsidence, changing runoff patterns, anticipated rises in sea level with climate change, and potential earthquakes further raise the risk of levee failure and severe economic losses.

In this context, our brief AIC report was modest in its objectives. We look specifically to agriculture in the Delta itself and ask how its prospects might be improved. In part, we examine the efficacy for the Delta of proposals that have been made to stimulate agriculture and rural communities in other regions. We consider potential options that might increase farm and rural revenue in the Delta, including rural tourism, specializing in local markets, production of biofuels, and shifting land out of agriculture to generate revenue through ecological tourism. At the same time, long term maintenance of Delta agriculture requires dealing with infrastructure, including levees.

Most land in the Delta is dedicated to agriculture, but the share of agricultural land out of total land area fell from about 80 percent in 1984 to about 74 percent in 2008 (about 400 thousand acres of irrigated cropland). Field crops and pasture cover most of the Delta agricultural acreage. Corn, alfalfa, irrigated pasture, wheat, sorghum, safflower and processing tomatoes are all important. Delta agriculture is a part of the global market for basic feed and food commodities, but since transport cost is high relative to price, many of the main commodities are fed or processed locally. In addition to field crops, farmers plant winegrapes, tree crops and vegetables, including fresh tomatoes on almost 75 thousand acres in the Delta.

Farmland in the Delta faces severe challenges and maintenance of current land use patterns would likely require massive investments.

Options to maintain agriculturally-related incomes on fewer acres

Increase agritourism. The Delta attracts many visitors to its waterways and other resources and there is an opportunity to expand the revenues that farms receive from these visitors. Three main issues arise however. First, the current pattern of field crops is not as conducive to tourism as would be small vegetable or tree and vine crop farms, so most of Delta agriculture would be unlikely to benefit much. Second, much of agriculture would continue to require major investments to avoid saltwater intrusion and flooding. Third, environmental health, a likely precondition for tourism, may conflict with maintaining the current pattern of farming.

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Production for local markets. Delta agriculture already focuses on supplying inputs for nearby livestock herds and flocks and for local processing plants. Some farms already seek price premiums or other advantages from producing and marketing through local retail markets. However, regional agricultural abundance means stiff competition in local markets. The Delta has no unique niche and encouraging local consumption of local produce is an indirect and potentially quite costly agricultural stimulus compared to limiting local impediments to agriculture, including those that discourage local supply and agritourism.

Biofuel feedstock. The Delta already produces a substantial amount of corn, which is the main biofuel feedstock in the United States. But, most local corn acreage is devoted to feeding local cattle in the form of silage or grain. Most biofuels or feedstock used in California come from Midwest farms. There is a potential for expanding biofuels usage only if local corn is cheaper than importing feedstock or biofuel from the Midwest, which continues to have a comparative advantage in corn production.

Ecotourism consistent with farming. The environmental resources in the Delta already attract many visitors. But expanding the appeal of the natural environment may not be consistent with maintaining farm production in its current pattern. Certainly, some agriculture is consistent with reversion to a more natural or historical landscape, but the present configuration of farmland use is unlikely to satisfy environmental demands for such tourism. Furthermore, even if additional visitors could be attracted to the natural landscape in the Delta, farmers would likely find it difficult to capture enough additional revenue to offset farmland losses.

Infrastructure investments and Delta agriculture

Maintaining Delta agricultural acreage would require substantial investment in levees and related infrastructure. Lund and co-authors estimate that, with new challenges of flooding and salinity, to improve the levee system to protect key islands and about 250,000 acres would cost about \$4 billion--a cost of \$16,000 per acre. To put these numbers in perspective, irrigated field crop land in the Delta is worth about \$6,000 per acre, so the total farm value of the land to be protected is about \$1.5 billion. Frankly, it is hard to justify spending public money far in excess of the value that farmers and landowners themselves place on the land.